

**System and Method for Concurrent WLAN and WPAN
Wireless Modes From a Single Device**

ABSTRACT

A system and method for concurrent WLAN and WPAN
5 wireless modes from a single device is presented. A client
uses a Wi-Fi device's infrastructure mode to communicate in
a WLAN environment and, during idle WLAN times, uses the
Wi-Fi device's adhoc mode to communicate in a WPAN
environment. The Wi-Fi device uses a watchdog timer to
10 switch between infrastructure mode and adhoc mode. When
the client's Wi-Fi device switches to infrastructure mode,
the client's Wi-Fi device uses an infrastructure register
and an infrastructure device driver to transfer data over
the WLAN environment. Likewise, when the client's Wi-Fi
15 device switches to adhoc mode, the client's Wi-Fi device
uses an adhoc register and an adhoc device driver to
transfer data over the WLAN environment. The client uses a
code shim to act as a virtual device driver at times when
either the infrastructure device driver or the adhoc device
20 driver is inactive.